

Bambusa Chino Franchet & Savatier, Enum. Pl. Jap. II. pt. 1, 183 (1876), nom. nud.; pt. 2, 607 (1879).

Arundinaria japonica Franchet & Savatier, l. c. 182, pro parte, quoad specim. Savatier no. 1492.—Non Sieb. & Zucc.

Arundinaria Laydekeri Bean in Gard. Chron. sér. 3, xv. 368 (1894).

Bambusa Laydekeri Hort. apud Satow in Trans. Asiat. Soc. Jap. XXVII. 47 (1899).

Arundinaria Simoni var. *Chino* Makino in Tokyo Bot. Mag. XIV. (62) & 98 (1900).—Matsumura, Ind. Pl. Jap. II. pt. 1, 89 (1905).—Makino & Shirasawa, Icon. t. 5, fig. 7-14 (1912).

Arundinaria Chino Makino in Tokyo Bot. Mag. XXVI. 14 (1912).

HONDO.

Pleioblastus Maximowiczii var. **argenteo-striatus** Nakai, comb. nov.

Arundinaria Simoni var. *argenteo-striata* Makino in Tokyo Bot. Mag. XIV. (62), 100 (1900).—Matsumura, Ind. Pl. Jap. II. pt. 1, 89 (1905).—Makino & Shirasawa, Icon. t. 8, fig. 9-17 (1912).

Arundinaria Chino var. *argenteo-striata* Makino in Tokyo Bot. Mag. XXVI. 14 (1912).

JAPONIA: in hortis.

7. Pleioblastus Simoni Nakai, comb. nov.

Bambusa Metake Zollinger, Syst. Verz. I. 57 (1854), nom. nud.—Non Siebold.

Arundinaria japonica A. Gray in Mem. Am. Acad. Sci., new ser. VI. 328 (1859), pro parte.—Matsumura, Shokubutsu-meii, 32 (1895).—Satow in Trans. Asiat. Soc. Jap. XXVII. 43 (1899).—Non Sieb. & Zucc.

Bambusa Simoni Carrière in Rev. Hort. 1876, 359.

Arundinaria Fortunei Fenzl in Gard. Chron. n. ser. VI. 773 (1876).—Non Rivière.

Arundinaria Simoni A. & C. Rivière in Bull. Soc. Accl. sér. 3, v. 774, fig. 43-50 (1878).—Bean in Gard. Chron. ser. 3, xv. 368 (1894).—Mitford, Bamb. Gard. 59 (1896).—Makino in Tokyo Bot. Mag. XIV. 62, 95 (1900).—Matsumura, Ind. II. pt. 1, 89 (1905).—J. Houzon in Mitt. Deutsch. Dendr. Ges. XVI. 226 (1907).—Makino & Shirasawa, Icon. t. 7, fig. 1-5 (1912).—Camus, Bamb. 33, t. 17, fig. B. (1913).—Nohl in Mitt. Deutsch. Dendr. Ges. XXIV. 100 (1915).

Arundinaria vaginata Hackel in Bull. Herb. Boiss. VII. 717 (1899).

JAPONIA: in Hondo, Shikoku, Kiusiu et Ins. Tsushima.

In the southeastern end of Korean peninsula between Basan and Hokô this species is planted to make hedges. The history of introduction is unknown. Faurie's no. 1203 is a fruiting specimen collected at Fusan. Two varieties exist in Japanese gardens.

Pleioblastus Simoni var. **variegatus** Nakai, comb. nov.

Arundinaria Simoni var. *variegata* Hooker fil. in Bot. Mag. CXVI. t. 7146 (1890), styli male delineati.—Makino in Tokyo Bot. Mag. XIV. 97 (1900).—Matsumura, Ind. Pl. Jap. II. pt. 1, 90 (1905).—Nohl in Mitt. Deutsch. Dendr. Ges. XXIV. 100 (1915).

Arundinaria Simoni var. *albo-striata* Bean in Gard. Chron. ser. 3, xv. 301 (1894).

Arundinaria Simoni var. *striata* Mitford, Bamb. Gard. 59 (1896).

Arundinaria Simoni Hackel in Bull. Herb. Boiss. VII. 716 (1899).—Non Rivière.

Pleioblastus Simoni var. **heterophyllus**, Nakai, comb. nov.

Arundinaria Simoni var. *heterophylla* Makino apud Makino & Shirasawa, Icon. t. 8, fig. 18-24 (1912).

Indocalamus,¹ gen. nov.

Sympodialis pleuranthus. Nodi ramorum distantes ita ramuli distantes et gemma solitaria. Vaginae foliorum persistentes; folia tessellata; setae orales e processu calloso evolutae, scabrae vel parce setulosae, fuscescentes vel fere albae. Spiculae in apice rami foliati vel efoliati terminales paniculatae; panicula bracteata vel ebracteata; rachis sub flores articulata; spiculae basi glumis vacuis binis instructa; gluma fertilis exterior falcato-convoluta, subcoriacea, tessellata vel fere non tessellata, interior dorso bicarinato-sulcata; paleae 3 subaequales; stamina 3, antheris saepe coloratis; stylus 1, stigmata 2 arcuata plumosa.

Species 7 in Zeylania, India orient., China, Philippin. et Formosa indigenae.

This genus is very much like *Sasa*, but differs in the numbers of stamens and stigmas.

1. Indocalamus Fargesii Nakai, comb. nov.

Arundinaria Fargesii E. G. Camus in Lecomte, Not. Syst. II. 244 (1911).

CHINA.

2. Indocalamus floribundus Nakai, comb. nov.

Arundinaria floribunda Thwaites, Enum. Zeyl. Pl. 375 (1864).—Munro in Trans. Linn. Soc. XXVI. 20 (1868).—Gamble, Ind. Bamb. 5, t. 3 (1896); in Hooker, Fl. Brit. Ind. VII. 377 (1897).—Camus, Bamb. 28, t. 16, fig. B (1913).

ZEYLANIA.

3. Indocalamus niitakayamensis Nakai, comb. nov.

Arundinaria niitakayamensis Hayata in Tokyo Bot. Mag. XXI. 49 (1907); in Jour. Coll. Sci. Tokyo, XXV. 240 (1908).—Gamble in Philip. Jour. Sci. Bot. V. 267 (1910).—Merrill, Enum. Philip. Flow. Pl. I. fasc. 1. 94 (1922).

Bambusa aff. *B. pygmaea* apud Merrill in Philip. Jour. Sci. Bot. II. 261 (1907).

Sasa niitakayamensis Camus, Bamb. 24 (1913).

Sasa niitakayamensis var. *microcarpa* Camus, l. c.

FORMOSA ET PHILIPPIN.

4. Indocalamus rigidulus Nakai, comb. nov.

Arundinaria rigidula E. G. Camus in Lecomte, Not. Syst. II. 243 (1911).

CHINA.

5. Indocalamus sinicus Nakai, comb. nov.

Arundinaria sinica Hance in Ann. Sci. Nat. sér. 4, XVIII. 235 (1862); in Jour. Linn. Soc. XIII. 137 (1873).—Rendle in Jour. Linn. Soc. XXXVI. 436 (1904).

Arundinaria longiramea Munro in Trans. Linn. Soc. XXVI. 19 (1868).

Arundinaria Wightii Nees apud Bentham, Fl. Hong. 434 (1861).

Arundinaria sinica [sic] Hance apud Camus, Bamb. 47 (1913).

HONGKONG.

6. Indocalamus Walkerianus Nakai, comb. nov.

Arundinaria Walkeriana Munro in Trans. Linn. Soc. XXVI. 21 (1868).—

Gamble, Bamb. Ind. 3, t. 1 (1896).—Trimen, Handb. Fl. Ceyl. V. 310 (1900).—Camus, Bamb. 27 (1913).

ZEYLANIA.

¹ Etymology: Indo, of India, a country extending from the East Indies to China, and calamus, reed.

7. *Indocalamus Wightianus* Nakai, comb. nov.

Arundinaria Wightiana Nees in *Linnaea*, ix. 482 (1834).—Ruprecht, *Bamb.* 26, t. 3, fig. 10 (1839).—Steudel, *Syn. Gram.* 335 (1855).—Thwaites, *Enum. Zeyl. Pl.* 444 (1864).—Munro in *Trans. Linn. Soc.* xxvi. 19 (1868).—Gamble, *Bamb. Ind.* 4, t. 2 (1896); in Hooker, *Fl. Brit. Ind.* vii. 377 (1897).—Camus, *Bamb.* 28, t. 22, f. B (1913).

INDIA ET ZEYLANIA.

Indocalamus Wightianus var. *hispidus* Nakai, comb. nov.

Arundinaria hispida Steudel, *Syn. Gram.* 335 (1855).

Arundinaria Wightiana var. β *hispida* Gamble, *Bamb. Ind.* 4 (1896); in Hooker, *Fl. Brit. Ind.* vii. 377 (1897).

Arundinaria moliniformis Hochstetter in herb. Hohenacker n. 1282 apud Gamble, l. c.

INDIA.

Widely different types were described hitherto under *Arundinaria*, so that the genus became unreasonably large and complicated. The true *Arundinaria* grows in North America and Asia. These are *Arundinaria macrosperma* Michaux (type), *A. tecta* Muhlenberg, *A. maling* Gamble, *A. Wilsonii* Rendle, *A. Faberi* Rendle. The latter three species have more branched culms and may represent a distinct section. *Arundinaria hirsuta* Munro and *A. Rolloana* Gamble are probably species of this genus but without flowers we can not determine their exact position. These species have the oral setae (setae orales, v. s.) rigid and scabrous somewhat brownish and radiating from a common thick process of the edge of the sheath. They drop with that process from the sheath by articulation. The species of *Phyllostachys* and *Sasa* have this kind of setae. The nature of setae is an important generic character in classifying Bamboos. It is as important as the form of pappus in *Compositae*.

Mr. Makino who studied the Japanese Bamboos very carefully has cleverly separated *Pseudosasa*, *Chimonobambusa*, *Semiarundinaria* and *Sinobambusa* from *Arundinaria*, though he has not given any descriptions, but there are sufficient reasons for distinguishing these genera. The group of *Arundinaria* has tessellate leaves as has the *Phyllostachys* group and includes the following genera besides the two genera described above.

1. *Sasa* Makino & Shibata

Vaginae culmorum appendiculatae vel inappendiculatae, persistentes; gemma solitaria; setae orales scabrae rigidae vel rarius non evolutae. Inflorescentia paniculata, glumae tessellatae, exteriores saepe aristato-acuminatae; stamina 6; stylus 1; stigmata 3, subplumosa.

1. *Sasa bitchuensis* Makino in *Tokyo Bot. Mag.* xxviii. 31 (1914).
2. *S. chartacea* Makino & Shibata in *Tokyo Bot. Mag.* xv. 27 (1901).
3. *S. kurilensis* Makino & Shibata, l. c.
4. *S. nana* Makino in *Tokyo Bot. Mag.* xxvi. 13 (1912).
5. *S. purpurascens* Camus, *Bamb.* 19, t. 1, fig. B (1913).
6. *S. nipponica* Makino & Shibata in *Tokyo Bot. Mag.* xv. 24 (1901).

7. *S. ramosa* Makino & Shibata, l. c.
8. *Sasa senanensis* Rehder in Jour. Arnold Arb. i. 58 (1919).
9. *S. Shimidzuana* Makino in Jour. Jap. Bot. II. 4. 15 (1920).
10. *S. stenantha* Nakai, comb. nov.
S. senanensis var. *ontakensis* Franchet & Savatier, Enum. Pl. Jap. II. 606 (1879).
Bambusa stenantha Makino in Tokyo Bot. Mag. XIV. (62) (1900).
11. *S. tessellata* Makino & Shibata in Tokyo Bot. Mag. XV. 27 (1901).
12. *S. Tokugawana* Makino in Jour. Jap. Bot. i. 2, 6 (1916).
13. *S. Tsuboiana* Makino in Tokyo Bot. Mag. XXVI. 23 (1912).
14. *S. Veitchii* Rehder in Jour. Arnold Arb. i. 58 (1919).

II. *Pseudosasa* Makino

Vaginae culmorum fere inappendiculatae, persistentes; gemma solitaria; setae orales laeves. Spiculae corymboso-ramosae; glumae tessellatae, exteriores ariatatae; stamina 3 (4); stylus 1; stigmata 3, plumosa.

1. *Pseudosasa japonica* Makino in Jour. Jap. Bot. II. 4, 15 (1920).
Arundinaria japonica Siebold & Zuccarini ex Steudel, Syn. Gram. 334 (1855).
2. *Pseudosasa Owatarii* Makino in Jour. Jap. Bot. II. 4, 16 (1920).
Arundinaria Owatarii Makino in Tokyo Bot. Mag. XXI. 16 (1907).
3. *Pseudosasa variegata* Nakai, comb. nov.
Bambusa variegata Siebold apud Miquel in Ann. Mus. Bot. Lugd.-Bat. II. 285 (Prol. 173) (1866).
4. *Pseudosasa disticha* Nakai, comb. nov.
Bambusa disticha Mitford, Bamb. Gard. 183 (1896).

III. *Arundinaria* Michaux

Vaginae culmorum appendiculatae persistentes; gemmae solitariae sed demum ramuli in nodis saepe congesti; setae orales scabrae rigidae. Spiculae divaricato-racemosae; glumae indistincte tessellatae, exterior subaristata; stamina 3; stylus 1; stigmata 3, subplumosa.

1. *Arundinaria macrosperma* Michaux, Fl. Bor.-Amer. i. 74 (1803).
2. *Arundinaria tecta* Muhlenberg, Descrip. uber. Gram. Am. Sept. 191 (1817).
3. *Arundinaria Faberi* Rendle in Jour. Linn. Soc. XXXVI. 435 (1904).
4. *Arundinaria Maling* Gamble apud Camus, Monog. Bamb. 31, t. 16, fig. A (1913).
5. *Arundinaria Wilsonii* Rendle in Jour. Linn. Soc. XXXVI. 437 (1904).

IV. *Semiarundinaria* Makino

Vaginae culmorum appendiculatae, deciduae vel puncto dorsali subpersistentes; gemmae plures; setae orales laeves rigidae. Spiculae race-

moso-ramosae vel paniculatae; glumae coriaceae, tessellatae, sed inconspicuae; stamina 3; stylus 1; stigmata 3, ciliata.

1. **Semiarundinaria fastuosa** Makino in Jour. Jap. Bot. II. 8 (1918).
Bambusa fastosa Mitford, Bamb. Gard. 105 (1896).
Arundinaria Narihira Makino in Tokyo Bot. Mag. XIV. (63) (1900), cum var.
2. **Semiarundinaria sat** Nakai, comb. nov.
Arundinaria Sat Balansa in Jour. de Bot. IV. 28 (1890).
3. **Semiarundinaria Pantlingii** Nakai, comb. nov.
Arundinaria Pantlingii Gamble, Ind. Bamb. 129, t. 118 (1896).

V. **Chimonobambusa** Makino

Vaginae culmorum fere inappendiculatae, deciduae; gemmae plures; setae orales laeves. Spiculae racemosae; glumae non tessellatae longitudine elevato-nervosa; stamina 3; styli 2; stigmata ciliata.

1. **C. baviensis** Nakai, comb. nov.
Arundinaria baviensis Balansa in Morot, Jour. de Bot. IV. 28 (1890).
2. **C. callosa** Nakai, comb. nov.
Arundinaria callosa Munro in Trans. Linn. Soc. XXVI. 30 (1868).
3. **C. densifolia** Nakai, comb. nov.
Arundinaria densifolia Munro, l. c. 32.
4. **C. falcata** Nakai, comb. nov.
Arundinaria falcata Nees in Linnaea, IX. 478 (1834).
5. **C. Griffithiana** Nakai, comb. nov.
Arundinaria Griffithiana Munro in Trans. Linn. Soc. XXVI. 30 (1868).
6. **C. Hookeriana** Nakai, comb. nov.
Arundinaria Hookeriana Munro, l. c. 29.
7. **C. intermedia** Nakai, comb. nov.
Arundinaria intermedia Munro, l. c. 28.
8. **C. khasiana** Nakai, comb. nov.
Arundinaria khasiana Munro, l. c. 28.
9. **C. marmorea** Makino in Tokyo Bot. Mag. XXVIII. 154 (1914).
Bambusa marmorea Mitford, Bamb. Gard. 93 (1896).
10. **C. polystachya** Nakai, comb. nov.
Arundinaria polystachya Kurz apud Gamble, Ind. Bamb. 7, t. 5 (1896).
11. **C. pumila** Nakai, comb. nov.
Arundinaria pumila A. Chevalier & A. Camus in Bull. Mus. Hist. Nat. Paris, XXVII. 450 (1921).
12. **C. quadrangularis** Makino in Tokyo Bot. Mag. XXVIII. 153 (1914).
Bambusa quadrangularis Fenzl in Bull. Soc. Tosc. Ort. v. 401 (1880).

VI. *Sinobambusa* Makino

Vaginae culmorum appendiculatae deciduae; internodia eximie elongata; gemmae plures; setae orales rigidae laeves. Spiculae racemosae subphyllopodae; glumae tessellatae, exteriores acutae; stamina 3; styli 2; stigmata ciliata.

1. *Sinobambusa elegans* Nakai, comb. nov.

Arundinaria elegans Kurz in Jour. As. Soc. Bengal, XLII. 248 (1873).

2. *Sinobambusa tootsik* Makino in Jour. Jap. Bot. II. 8 (1918).

Arundinaria Tootsik Makino in Tokyo Bot. Mag. XIV. (62) (1900).

VII. *Oreostachys* Gamble

Vaginae culmorum appendiculatae deciduae; gemmae plures; setae orales rigidae divaricato-patentes laeves. Spiculae subglomeratae vel breviter ramosae; involucra et glumae exteriores coriacea, non tessellata, obtusa; stamina 6; styli 2; stigmata ciliata, non plumosa.

1. *Oreostachys ciliata* Nakai, comb. nov.

Arundinaria ciliata Camus in Bull. Mus. Nat. Hist. Paris, XXV. 672 (1919).

2. *Oreostachys Pullei* Gamble apud Koorders in Versl. Afdeel. Natuurk. Kon. Akad. Wetensch. 1908, 657.VIII. *Fargesia* Franchet

Vaginae culmorum appendiculatae deciduae; gemmae plures; setae orales rigidae, fuscae, parce ciliatae vel glabrae. Involucra magna convoluta et spiculas congestas lateraliter amplexens, ita inflorescentia subunilateralis; glumae non tessellatae, sed elevato-nervosae, aristato-acuminatae; stamina 3; stylus 1, elongatus; stigmata 3, plumosa.

1. *Fargesia densiflora* Nakai, comb. nov.

Arundinaria densiflora Rendle in Jour. Linn. Soc. XXXVI. 434 (1904).

2. *Fargesia spathacea* Franchet in Bull. Soc. Linn. Paris, II. 1067 (1893).

CONSPECTUS GENERUM

Stylus 1, trifidus.

Stamina 6. Gemma solitaria; setae orales scabrae. *Sasa*.
Stamina 3.

Vaginae culmorum inarticulatae persistentes, ita nodi ob vaginas emortuas saepe fibrosi.

Gemma solitaria.

Setae orales scabrae fuscae. Rami e basi ramulosi. Paleae subaequales. *Arundinaria*.

Setae orales laeves albae. Rami basi cum nodis 3-5 nudis. Palea una ceteris subduplo longior. *Pseudosasa*.

Gemmae plures, parallelae; setae orales laeves. Glumae subcoriaceae tessellatae; paleae inaequales. *Pleioblastus*.

- Vaginae culmorum complete vel subcomplete articulati, deciduae. Gemmae plures.
- Spiculae racemosae vel paniculatae; glumae conspicue vel inconspicue tessellatae. *Semiarundinaria*.
- Spiculae congestae unilaterales; glumae aristato-acuminatae non tessellatae, sed conspicue elevato-nervosae. *Fargesia*.
- Styli 2, liberi vel basi coaliti.
- Stamina 6. Spiculae subglomeratae vel breviter ramosae; glumae coriaceae non tessellatae. Setae orales radiatae, laeves. *Oreostachys*.
- Stamina 3.
- Gemma solitaria; vaginae culmorum persistentes. Spiculae paniculatae. Setae orales scabrae vel setulosae. *Indocalamus*.
- Gemmae plures, parallelae. Vaginae culmorum e basi articulatim deciduae. Spiculae racemosae. Setae orales laeves.
- Internodia anormaliter elongati. Glumae tessellatae laeves. Vaginae culmorum appendiculatae. *Sinobambusa*.
- Internodia non valde elongati. Glumae non tessellatae sed longitudine elevato-nervosae. Vaginae culmorum breviter vel non appendiculatae. *Chimonobambusa*.

The following species described under *Arundinaria* are incompletely known and their proper position is therefore indeterminable.

- A. anceps* Mitford, Bamb. Gard. 181 (1896).
- A. armata* Gamble, Ind. Bamb. 130, t. 119 (1896).
- A. jaunsarensis* Gamble, l. c. 23. t. 22.
- A. Kurzii* Gamble, l. c. 25, t. 25.
- A. Manni* Gamble, l. c. 26. t. 26.
- A. microphylla* Munro in Trans. Linn. Soc. xxvi. 32 (1868).
- A. gracilis* Blanchard in Rev. Hort. 1886, 490.
- A. Nagashima* Pfitzer apud J. Houzon in Mitt. Deutsch. Dendr. Ges. xvi. 226 (1907).
- A. nitida* Mitford in Gard. Chron. ser. 3, xviii. 186, t. 33 (1895).
- A. Ragamowskii* (Wheeler) Pfitzer apud J. Houzon in Mitt. Deutsch. Dendr. Ges. xvi. 224 (1907).
- A. Rolloana* Gamble; Ind. Bamb. 24. Pl. 23 (1896).
- A. suberecta* Munro in Trans. Linn. Soc. xxvi. 32 (1896).

The Mexican and South American Bamboos described under *Arundinaria* apparently belong to two or more undescribed genera.

SYRINGA RUGULOSA, A NEW SPECIES FROM WESTERN CHINA.

SUSAN DELANO McKELVEY.

Syringa rugulosa, sp. nov.

Frutex circiter 2 m. altus vel arbor parva; ramuli tomento denso villosa ad secundum annum persistente vestiti. Folia ovata vel elliptica, 3-7 cm. longa et 1.5-4 cm. lata, acuminata vel acuta, basi cuneata, margine saepe leviter irregulariter undulata, supra dense villosa et rugulosa costa et venis venulisque impressis, subtus densissime molliter villosa, costa et

venis utrinque 4–6 elevatis; petioli 2–5 mm. longi, dense villosi. Flores subsessiles, fasciculati in paniculis lateralibus interdum terminalibus 7–12 cm. longis; rachis dense villosa; calyx campanulatus, plerumque distincte dentatus dentibus ovato-triangularibus acutis vel acuminulatis; corolla tubo gracili 5–7 mm. longo, lobis ovatis 2–3 mm. longis acutiusculis interdum cucullatis; stamina paullo infra faucem inserta antheris pallidis faucem non superantibus.

YUNNAN: undergrowth of the mountains at Tcha-ho; alt. 2600 m., *E. E. Maire*, July, 1914 (type; no. 169, Herb. Roy. Botanic Garden, Edinburgh); thickets of the mountains at Té-long-tsin, alt. 3000 m., *E. E. Maire*, June (no. 503, Herb. Arnold Arboretum).

This species is most closely related to *S. Potaninii* Schneid., which differs in the not distinctly rugulose leaves, less densely pubescent branchlets and inflorescence, in the minute appressed pubescence of the usually truncate calyx, in the longer and narrower corolla-lobes and in the stamens being inserted much below the mouth. The flowers of the specimen from Tcha-ho are according to the collector rose-violet, while those of the specimen from Té-long-tsin are described as white.

AMELASORBUS, A NEW BIGENERIC HYBRID.

ALFRED REHDER.

Amelasorbus (*Amelanchier* × *Sorbus*), gen. hybr. nov.

Intermediate between the parents: from *Amelanchier* the hybrid differs chiefly in the partly pinnate leaves, the paniculate inflorescence and in the free styles, while from *Sorbus* (§ *Aucuparia*) it is distinguished by the mostly undivided leaves, only partly more or less pinnate or pinnately lobed below the middle, in the secondary axes of the compound inflorescence being racemose, not corymbose, in the oblong petals, in the usually 5 styles and in the presence of imperfect false septa in the fruit. Only known in the following form:

Amelasorbus Jackii (*Amelanchier florida* × *Sorbus sitchensis*), hybr. nov.

Frutex robustus, 2–3 m. altus; ramuli robusti, initio laxe villosi, citissime glabri, purpurei vel purpurascens, vetustiores rubro-fusci, luciduli; gemmae oblongo-ovoideae, 6–8 mm. longae, acutae, perulis exterioribus 4–6, apice et partim ad marginem leviter lanuginosis ceterum glabris purpureo-brunneis. Folia ovalia vel elliptica, rarius oblongo-elliptica, 3.5–6 cm. longa, apice rotundata vel acutiuscula, basi rotundata vel cordata grosse dentata dentibus late ovatis acuminulatis, ad basin pleraque integra, initio laxe villosa, cito glabra, nervis utrinsecus 10–12, pleraque indivisa sed pauca basi lobis vel foliolis 1–3 instructa; petioli 1–25 cm. longi, glabri; folia turionum oblongo-elliptica vel ovato-oblonga, 5–10 cm. longa,

plura basi foliolis 2-4 ellipticis vel elliptico-oblongis 2-3 cm. longis dentatis instructa, supra basin plus minusve lobata lobis apicem versus decrescentibus, supra medium indivisa, ceterum ut in foliis ramulorum floriferorum; petioli 1.5-3 cm. longi; stipulae lineari-lanceolatae, circiter 5 mm. longae, caducae. Inflorescentia paniculata ad 5 cm. longa, tenuiter villosula; axes secundarii racemosi, 1-3 inferiores foliis suffulti, infimus 5-9-florus pedicello infimo interdum 2-floro, apicem versus decrescentes; pedicelli 2-3 mm., in fructu ad 6 mm. longi; hypanthium extus et sepala triangulari-ovata acuminulata utrinque villosula; petala alba, oblonga, 9-10 mm. longa, obtusa, ad basin cuneatam supra lanata, apice sparse lanato-ciliosa; stamina 20, longiora 3 mm. longa, antheris ut videtur sterilibus; styli 5, raro 4, 2.5-3 mm. longi, staminibus paullo breviora, ad medium ovarii liberi basi villosi, hypostylio medio fere ad basin villosi; ovarium apice dense villosum, 4-5-loculare, loculis in parietie exteriori manifeste costata costa post anthesin in lamellam crassam ad medium loculum prominentem accrescente, ideo fructus imperfecte 8-10-loculatus. Fructus subglobosus vel globoso-ovoidea, 6-8 mm. diam., in sicco atro-coerulea, pruinosa, in vivo (sec. collectorem) rubra, coeruleo-pruinosa, sepalis persistentibus erectis ovato-lanceolatis circiter 4 mm. longis coronatus; semina pauca perfecta, ellipsoidea, compressa, circiter 4 mm. longa, castanea.

IDAHO: summit of Elk Butte, Clearwater County, alt. about 2000 m., *J. G. Jack*, no. 1329, September 4, 1918. Cultivated specimens: Arnold Arb. (from seed of no. 1329) under no. 17688, September 20, 1923, and May 19, 1925.

This interesting hybrid was discovered by Professor J. G. Jack in Idaho on the open and rocky summit of Elk Butte. In general appearance the original specimens as well as the plants growing in the Arnold Arboretum have the aspect of a vigorous plant of *Amelanchier*, and only on closer inspection one may notice the presence of partly pinnate leaves and the compound inflorescence. The flowers, too, with their oblong upright petals look much like those of *Amelanchier*, but the styles are distinct, and the false partitions of the fruit extend only to about the middle of the locule and are abnormally thick in the sterile cells.

The parents of the hybrid are apparently *Sorbus sitchensis* Roem. and *Amelanchier florida* Lindl. of which specimens were collected on the same date at the same locality; the first species being represented by Jack's no. 1333 and the second by his no. 1332. From *Sorbus sitchensis* the hybrid is easily distinguished by the mostly simple leaves, smaller, not viscid winterbuds, the smaller paniculate inflorescence with racemose not corymbose branches, the oblong petals, 4-5 styles, and by the dark colored pruinose fruit with long ovate-lanceolate sepals. From *Amelanchier florida* the hybrid differs chiefly in the larger, more coarsely serrate and occasionally partly pinnate or lobed leaves, in the villous apex of the bud-scales, in the compound inflorescence, shorter petals, distinct styles and in the larger fruit with upright or nearly upright sepals, with shorter